Courses	Objective
STEP 1 VolsTeach: Inquiry Approaches to Teaching	Step 1 course allows students to explore teaching with an emphasis on inquiry-based learning using the 5E Instructional Model. Following an introduction to the theory and practice behind excellent inquiry-based science and mathematics instruction, students teach lessons in elementary classrooms to obtain firsthand experience in planning and implementation.
STEP 2 VolsTeach: Inquiry-Based Lesson Design	Step 2 course is an extenuation of the Step 1 course with field experiences that target inquiry-based teaching in middle school classrooms. The Step 2 course emphasizes writing high quality 5E lesson plans with a focus on the importance of using appropriate questioning strategies throughout the lesson.
VolsTeach Knowing and Learning ***Prerequisites:*** **Step 2 VolsTeach: Inquiry-Based Lesson Design**	A variety of theories and frameworks addressing how people learn in mathematics and science are explored in this course. Types of scientific and mathematical thinking target such questions as: What does it mean to know something? What does it mean to learn something? How can we understand what students are thinking?
Classroom Interactions in Science and Math ***Prerequisite:*** **VolsTeach Knowing and Learning**	Classroom Interactions builds on the Knowing and Learning course, moving from a focus on thinking and learning to a focus on teaching and learning. The course is centered around a close examination of the interplay between teachers, students, and content. Prospective teachers are also introduced to ways in which curriculum and technology are used in classroom settings to build interrelationships among teachers and students.
Perspectives on Science	The Perspectives class explores a selection of topics and episodes in the history of science and mathematics of how practical needs, social conflicts, and even individual personalities shaped the content and direction of the sciences.
Perspectives on Mathematics	The Perspectives class explores a selection of topics and episodes in the history of mathematics of how practical needs, social conflicts, and even individual personalities shaped the content and direction of mathematics.
Functions and Modeling	Functions and Modeling is a mathematics course designed to address the unique needs of future teachers of mathematics. In this course, students engage in explorations and lab activities designed to strengthen and expand their knowledge of the topics

Math Majors Only ***Prerequisites: See Advisor***	found in secondary mathematics.
Research Methods in Science and Math ***Prerequisites: See Advisor***	Research Methods is a one-semester three-hour course. Research Methods simultaneously provides students specific techniques needed to address scientific questions and an example of how to provide this sort of training for students through individualized instruction.
Project-Based Instruction (PBI) ***Prerequisites: Knowing and Learning*** **and** ***Classroom Interactions***	Project-Based Instruction (PBI) is the capstone course in the sequence of professional development courses (Knowing and Learning, Classroom Interactions, and PBI) VolsTeach students take prior to Apprentice Teaching. Through a dynamic process of investigation and collaboration and using the same processes and technologies that real scientists, applied mathematicians and engineers use, students work in teams to formulate questions, make predictions, design investigations, collect and analyze data, make products and share ideas.
Apprentice Teaching ***Prerequisite: Project Based Instruction***	The purpose of Apprentice Teaching is to offer VolsTeach students a culminating experience that provides them with the tools needed for their first teaching jobs. Apprentice Teaching reinforces and augments teaching strategies that students have developed through their coursework and field experiences. The program also attempts to fill in any gaps in students' professional development.

Courses Requiring Field Experiences

Course Title	Field Experience Setting
STEP 1 VolsTeach: Inquiry Approaches to Teaching	Elementary School
STEP 2 VolsTeach: Inquiry-Based Lesson Design	Middle School
Classroom Interactions in Science and Math	High School
Project-Based Instruction (PBI)	High School
Apprentice Teaching	High School